

REMARKS

This application is amended in a manner believed to place it in condition for allowance at the time of the next Official Action.

Claims 1, 13, and 19 are amended. Support for the amendment to the claims may be found generally throughout the specification, for example, the first and second paragraphs of page 3 and Figure 2.

Claims 3, 5, 6, 16, 17, and 18 are canceled without prejudice, as applicants reserve the right to file one or more divisional applications directed to the non-elected subject matter.

Claims 1, 2, 4, 7-15, and 19 remain pending in the application.

The Official Action rejects claims 1 and 13, and by dependency claims 2-12 and 14-16, under 35 USC 112, second paragraph, as being indefinite. This rejection is respectfully traversed.

The position of the Official Action is that the use of both "free" and "bonding" in reference to the phosphate group is unclear.

Claims 1 and 13 are amended so as to recite "phosphate group" instead of "free phosphate group". Additionally, applicants respectfully direct the Examiner's attention to the expression "free phosphate group" was used to show that the

biochip of claim 1, as well as claim 13, was obtained by means of a reaction of metal and a phosphate group, which was initially free. This is discussed, on page 3 of the present specification and illustrated in Figure 2.

Therefore, the claims are definite, and withdrawal of the rejection is respectfully requested.

Claim 16 is rejected under 35 USC 102(e) as being unpatentable over STAHLER et al. U.S. 7,097,974 (STAHLER). This rejection is moot, as claim 16 is canceled.

Claims 1, 4, 7-15 are rejected under 35 USC 103(a) as being unpatentable over AGRAWAL et al. WO 2003/046508 A2 (AGRAWAL) in view of PETRUSKA et al. (PETRUSKA) and LOCKHART et al. U.S. 5,556,752 (LOCKHART). This rejection is respectfully traversed.

AGRAWAL, at best, includes a 102(e) date of November 9, 2001. As such, AGRAWAL fails to qualify as prior art with respect to the claimed invention.

The present application claims priority to French application No. 02/09456 filed July 25, 2002. To perfect applicants' claim to priority, a verified English translation of the French priority document is filed along with this amendment.

Moreover, the claimed invention of the present application was described in an "Enveloppe Soleau", dated April 30, 2001, filed with the French Patent Office (INPI) on May 17, 2001 to register a date for the claimed invention. Applicants

respectfully direct the Examiner's attention to the Declaration filed Under Rule 131 in the appendix of this amendment in view of the "Enveloppe Soleau", and verified English translation thereof.

Thus, the Declaration and the "Enveloppe Soleau" establish the effective date of the claimed invention prior to the priority date of AGRAWAL, and AGRAWAL fails to qualify as prior art.

Accordingly, the remaining publications applied in the rejection are PETRUSKA and LOCKHART.

PETRUSKA relates to a film of Langmuir-Blodgett type comprising metal (zirconium) phosphonates. PETRUSKA describes a solid support the surface of which is covered with zirconium by means of phosphonic acid (spacer) (see scheme 1, page 132). However, PETRUSKA fails to describe the bonding of a biopolymer with said solid support.

LOCKHART describes in particular solid supports  $Y - L^1 - X^1 - L^2 - X^2$  (see column 8, line 30), wherein Y represents said solid support,  $L^1$  represents an optional spacer,  $L^2$  is a linking group having sufficient length such that  $X^1$  and  $X^2$  form a double-stranded oligonucleotide, and  $X^1$  and  $X^2$  represent a pair of complementary oligonucleotides.

LOCKHART does not disclose nor suggest solid supports having a surface of which is covered with a metal. Furthermore, the biopolymer of LOCKHART ( $X^1$  and  $X^2$  oligonucleotides) is linked to the solid support by means of a hydroxyl group (column 9,

liens 43-45). LOCKHART fails to disclose an ionocovalent bonding between the metal surface of a solid support and the phosphate group of a biopolymer.

It would not have been obvious for a skilled person to obtain the biochip as claimed in the present application starting from PETRUSKA and LOCKHART, as the skilled person would not have been incited to prepare a biochip by ionocovalent bonding between a metal surface and a phosphate group of a biopolymer in the absence of any recognition of such bonding.

Therefore, withdrawal of the rejection is respectfully requested.

Claims 2 and 19 are rejected under 35 USC 103(a) as being unpatentable over AGRAWAL in view of PETRUSKA and LOCKHART, and further in view of GAGNA et al. U.S. 6,936,461 (GAGNA). This rejection is respectfully traversed.

AGRAWAL, PETRUSKA, and LOCKHART are relied on for the reasons discussed above.

GAGNA does not qualify as prior art, in view of the Declaration and "Enveloppe Soleau" provided in the appendix of this amendment. At best, GAGNA has a 102(e) date of July 31, 2001.

Thus, GAGNA cannot remedy the shortcomings of either PETRUSKA or LOCKHART for reference purposes.

Therefore, withdrawal of the rejection is respectfully requested.

In view of the amendment to the claims and the foregoing Remarks, applicants believe that the present application is in condition for allowance at the time of the next Official Action. Allowance and passage to issue on that basis is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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APPENDIX:

- Declaration Under Rule 131 and attached "Enveloppe  
Soleau" with a verified English translation
- Verified English translation of French priority document  
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